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EXAMINER

FERGUSON, KEITH

ART UNIT PAPER NUMBER

2683

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/704,504

Applicant(s)

MOHEBBI ET AL.

Examiner

Keith T. Ferguson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 and 38-54 is/are rejected.
- 7) ☒ Claim(s) 9-12 and 34-37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8,13,17-33,38,42-44, and 46-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Labedz in view of Kotzin et al., newly recited reference and Proctor, newly recited reference.

Regarding claim 19,44 and 46, Labedz discloses a base station controller (fig. 1 number 104), for use in a cellular mobile communications network (fig. 1) that includes an array of base transceiver stations (fig. 1 numbers 101-103), each having a communications path connecting it to the base station controller such that (fig. 1), when an uplink signal is received from a mobile station (fig. 1 number 105) of the network by a plurality of the base transceiver stations of the array (page 40 line 8 through page 42 line 2), each of those base transceiver stations can transfer the received uplink signal via its said communications path to the base station controller (page 40 line 8 through page 42 line 2), which base station controller (fig. 1 number 104) includes: Labedz differs from claims 19,44 and 46 of the present invention in that it does not disclose a communications path assessment unit which assesses said communications paths according to one or more predetermined characteristics; and an informing unit which generates assessment signals indicating the results of the assessment of said communications paths and which transmits such assessment signals to the base transceiver stations of said plurality. Kotzin et

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al. teaches a speech decoder (fig. 3 number 201) control by a mobile switching center for assessing speech signals through links from a plurality of base stations receivers in case of soft handoff (col. 5 lines 1-26), and a selector switch (informing unit) for selecting a link to the base stations according to the speech decoder assessment (fig. 3 number 300).. Proctor teaches that it known for base station controllers to have speech decoders for decoding a mobile encoded message (col. 1 lines 35-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Labedz with a communications path assessment unit which assesses said communications paths according to one or more predetermined characteristics; and an informing unit which generates assessment signals indicating the results of the assessment of said communications paths and which transmits such assessment signals to the base transceiver stations of said plurality in order for the base station controller to survey the links to each base station in case there are dropped calls or poor quality during a soft handoff call when the mobile station roams between base stations, as taught by Kotzin et al. and Proctor.

Regarding claims 20,28,50 and 53, Labedz discloses said base transceiver stations of said plurality are base transceiver stations of said array involved in a soft hand-off operation with said mobile Station (page 41 lines 5-11).

Regarding claims 21,29,51 and 54, Labedz discloses a predetermined characteristics (pilot characteristics) (availability) (page 41 lines 15-29).

Regarding claims 27 and 52, Labedz discloses methods (fig. 4) for use in a cellular mobile communications network (fig. 1) including: a base station controller (fig. 1 number 104); an array of base transceiver stations (fig. 1 numbers 101-103), each having a communications path connecting it to said base station controller (fig. 1 number 104), such that when an uplink signal is received from a mobile station of the network by a plurality of the base transceiver stations of said array (page 40 line 8 through page 42 line 2), each base transceiver station of said plurality can transfer the received uplink signal via its said communications path to said base station controller (page 40 line 8 through page 42 line 2). Labedz differs from claim 27 of the present invention in that it does not disclose the communications

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path assessment are assess according to one or more predetermined characteristics; and based on the assessment one of the plurality of base stations is prevented from transferring the received uplink signal to the base station controller. Kotzin et al., teaches a speech decoder (fig. 3 number 201) control by a mobile switching center for assessing speech signals through links from a plurality of base stations receivers in case of soft handoff (col. 5 lines 1-26), and a selector switch for preventing one of the plurality of base for transferring the uplink signal to the speech decoder (fig. 3 number 300). Proctor teaches that it known for base station controllers to have speech decoders for decoding a mobile encoded message (col. 1 lines 35-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Labedz with the communications path assessment are assess according to one or more predetermined characteristics; and based on the assessment one of the plurality of base stations is prevented from transferring the received uplink signal to the base station controller in order for the base station controller to survey the links to each base station in case there are dropped calls or poor quality during a soft handoff call and to choose a base stations that would provide better service to the mobile unit, as taught by Kotzin et al. and Proctor.

Regarding claims 22,23,24,32 and 33 and 49, Labedz discloses a base transceiver station (fig. 1 numbers 101-103), for use in a cellular mobile communications network in which an array of base transceiver stations including the claimed base transceiver station are connected to a base station controller (fig. 1 number 104) of the network by respective communications paths such that when an uplink signal is received from a mobile station by a plurality of the base transceiver stations of the array (fig. 1 number 105 and page 41 line 5 through page 42 line 2), each of those base transceiver stations can transfer the received uplink signal via its said communications path to said base station controller (page 41 line 5 through page 42 line 2). Labedz differs from claims 22,23 and 49 of the present invention in that it does not disclose a communications path assessment unit which assesses said communications paths according to one or more predetermined characteristics; and an informing unit which generates assessment signals indicating the results of the assessment of said communications paths and which transmits such assessment signals to the base transceiver stations of said plurality. Kotzin et al. teaches a speech decoder (fig. 3 number 201) control by a mobile switching center for assessing

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speech signals through links from a plurality of base stations receivers in case of soft handoff (col. 5 lines 1-26), and a selector switch (informing unit) for selecting a link to the base stations according to the speech decoder assessment (fig. 3 number 300). Proctor teaches that it known for base station to have speech decoders for decoding a mobile encoded message (col. 1 lines 35-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Labedz with a communications path assessment unit which assesses said communications paths according to one or more predetermined characteristics; and an informing unit which generates assessment signals indicating the results of the assessment of said communications paths and which transmits such assessment signals to the base transceiver stations of said plurality in order for the base station to survey the links to the base station controller in case there are dropped calls or poor quality during a soft handoff, as taught by Kotzin et al. and Proctor.

Regarding claims 1-8,13,30,31 and 38, Labedz discloses a cellular mobile communications network (fig. 1) including: a base station controller (fig. 1 number 104); an array of base transceiver stations (fig. 1 numbers 101-103), each having a communications path connecting it to said base station controller (fig. 1 number 104), such that when an uplink signal is received from a mobile station of the network by a plurality of the base transceiver stations of said array (page 40 line 8 through page 42 line 2), each base transceiver station of said plurality can transfer the received uplink signal via its said communications path to said base station controller (page 40 line 8 through page 42 line 2). Labedz differs from claims 1-8,13,30,31 and 38 of the present invention in that it does not disclose the communications path assessment are assess according to one or more predetermined characteristics; and based on the assessment one of the plurality of base stations is prevented from transferring the received uplink signal to the base station controller. Kotzin et al. teaches network comprising a speech decoder (fig. 3 number 201) control by a mobile switching center for assessing speech signals through links from a plurality of base stations receivers in case of soft handoff (col. 5 lines 1-26), and a selector switch for preventing one of the plurality of base for transferring the uplink signal to the speech decoder (fig. 3 number 300). Proctor teaches that it known for base station controllers to have speech decoders for decoding a mobile encoded message (col. 1 lines 35-40). Therefore, it

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would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Labedz with the communications path assessment are assess according to one or more predetermined characteristics; and based on the assessment one of the plurality of base stations is prevented from transferring the received uplink signal to the base station controller in order for the network and base station controller to survey the links to each base station in case there are dropped calls or poor quality during a soft handoff call and to choose a base stations that would provide better service to the mobile unit, as taught by Kotzin et al. and Proctor.

Regarding claims 17,25,42 and 47, Labedz discloses said base transceiver stations of said plurality are base transceiver stations of said array involved in a soft hand-off operation with said mobile station (page 41 lines 5-11).

Regarding claims 18,26,43 and 48, Labedz discloses a predetermined characteristics (pilot characteristics) (availability) (page 41 lines 15-29).

3. Claims 16 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Labedz (WO 97/41652) in view of Kotzin et al. and Proctor as applied to claims 1 and 30 above and in further view of Vaara.

Regarding claims 16 and 41, the combination of Labedz, Kotzin et al. and Proctor differs from claims 16 and 41 of the present invention in that they do not explicit disclose said communications path assessment unit includes a storage device for storing one or more measures of the performance of each of said communications paths. Vaara teaches a base station controller (communications path assessment unit) that includes a storage device for storing one or more measures of the performance of each of said communications paths (col. 5 lines 42-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Labedz, Kotzin et al. and Proctor with said communications path assessment unit includes a storage device for storing one or more measures of the performance of each of said communications paths in order to determine what uplink path provides the best connection for soft handoff, as taught by Vaara.

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4. Claims 14,15,39,40 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Labedz (WO 97/41652) in view of Kotzin et al. and Proctor as applied to claims 1,30, and 44 above and in further view of Gilhousen et al..

Regarding claims 14,15,39 and 40, the combination of Labedz, Kotzin et al. and Proctor differs from claims 14,15,39 and 40 of the present invention in that they do not explicit disclose said communications path assessment unit is operable to receive control signals generated by a communications path controller (mobile switching center) serving to monitor said communications paths, which control signals represent one or more measures of the performance of those communications paths. Gilhousen et al. teaches a base station controller (col. 7 lines 60-62) is operable to receive control signals generated by a communications path controller (MSC) serving to monitor said communications paths (col. 7 lines 37-54), which control signals represent one or more measures of the performance of those communications paths (col. 7 lines 37-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Labedz, Kotzin et al. and Proctor with said communications path assessment unit is operable to receive control signals generated by a communications path controller serving to monitor said communications paths, which control signals represent one or more measures of the performance of those communications paths in order to determine what base station is interfering with the mobile station call connection and to send a message to the base station to shut down its uplink call connection, as taught by Gilhousen et al..

Regarding claim 45, the combination of Labedz, Kotzin et al. and Proctor differs from claim 45 of the present invention in that they do not explicit disclose said assessment of the communications paths is carried out externally of the base station controller and the results of the assessment are communicated to the base station controller by one or more assessment signals, and said communications path disabling unit is operable to receive such assessment signals and to employ them to make the determination to prevent transfer of said downlink

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signal to at least one base transceiver station of said plurality. Gilhousen et al. teaches an assessment of the communications paths is carried out externally of the base station controller (i.e. at the MSC) and the results of the assessment are communicated to the base station controller by one or more assessment signals (col. 7 lines 41-47). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Labedz, Kotzin et al. and Proctor with said assessment of the communications paths is carried out externally of the base station controller and the results of the assessment are communicated to the base station controller by one or more assessment signals, and said communications path disabling unit is operable to receive such assessment signals and to employ them to make the determination to prevent transfer of said downlink signal to at least one base transceiver station of said plurality in order for the base station controller to receive instructions from the mobile switching center to inform one of the base station to shut down to prevent interference with another base station, as taught by Gilhousen et al..

Allowable Subject Matter

5. Claims 9-12 and 34-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: Regarding claims 9 and 34, the prior art of record fails to teach or suggest, alone or in combination wherein at least one base transceiver station of said plurality has two or more communications paths available for connecting it to the base station controller, and the network further includes an available path selection unit operable, when said communications path disabling unit determines that said transfer between its base transceiver station and the base station controller is to be made, to select one of said available communications paths.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith T. Ferguson whose telephone number is (703) 305-4888. The examiner can normally be reached on 6:30am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (703) 308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Keith Ferguson
Art Unit 2683
January 12, 2005

